

### PART III: IMPLEMENTATION SCHEDULE

The following table is a summary of actions and estimated costs for implementing the Ouachita rock pocketbook recovery plan. It is a guide for meeting the objectives discussed in Part II of this plan. This table indicates task priorities, task numbers, task descriptions, duration of tasks, responsible parties, and lastly, estimated costs. These tasks, when accomplished, should bring about the recovery of the species and protect its habitat. The estimated monetary needs for all parties involved in recovery are identified and, therefore, Part III reflects the total estimated financial requirements for the recovery of this species.

#### Key to priorities assigned in the Implementation Schedule (column 1)

1. Priority 1 - An action that must be taken to prevent extinction or to prevent the species from declining irreversibly in the foreseeable future.
2. Priority 2 - An action that must be taken to prevent a significant decline in species population, habitat quality, or some other significant negative impact short of extinction.
3. Priority 3 - All other actions necessary to meet recovery objectives.

#### Key to acronyms used in the Implementation Schedule

FWS Regions: 2 - Albuquerque (Southwest), 4 - Atlanta (Southeast)

#### **Federal Agencies**

CE - U.S. Army Corps of Engineers  
 EPA - U.S. Environmental Protection Agency  
 FERC - Federal Energy Regulatory Commission  
 FHWA - Federal Highway Administration  
 FS - U.S. Forest Service  
 FWS - U.S. Fish and Wildlife Service  
   EA - FWS External Affairs  
   ES - FWS Ecological Services  
   LE - FWS Law Enforcement  
   RE - FWS Realty  
   RS - FWS Refuges  
   WR - FWS Water Resources  
 USDA - U.S. Department of Agriculture

#### **State Agencies**

ADE - Arkansas Department of Ecology  
 ADPT - Arkansas Department of Parks and Tourism  
 AGFC - Arkansas Game and Fish Commission  
 AHTD - Arkansas Highway and Transportation Department  
 OCONS - Oklahoma Conservation Commission  
 ODEQ - Oklahoma Department of Environmental Quality  
 ODM - Oklahoma Department of Mines

ODT - Oklahoma Department of Transportation  
ODWC - Oklahoma Department of Wildlife Conservation  
ONHI - Oklahoma Natural Heritage Inventory  
OSDA - Oklahoma State Department of Agriculture  
OTRD - Oklahoma Tourism and Recreation Department  
OWRB - Oklahoma Water Resources Board  
TCEQ - Texas Commission on Environmental Quality  
TPWD - Texas Parks and Wildlife Department  
TxDOT - Texas Department of Transportation

**Private Entities**

AZAA - American Zoo and Aquarium Association  
Contr - Contractor (unspecified)  
HTRG - Hancock Timber Resource Group  
TNC - The Nature Conservancy  
WEYCO - Weyerhaeuser Company

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description   | Action Duration  | FWS    |          | Other  | Cost Estimates (\$1000s)                                      |   |   | Comments                      |
|-----------------|------------------------|--|------------------|--------|----------|--|---|---|---|-------------------------------|
|                 |                        |  |                  | Region | Program  |  | FY1   | FY2   | FY3   |                               |
| 1               | 1.1                    | Use existing statutes to protect the Kiamichi River system where the Ouachita rock pocketbook occurs | Continuous       | 2      | ES<br>LE | CE<br>EPA<br>FERC<br>FHWA<br>FS<br>USDA<br>ODWC<br>ODEQ<br>ODM<br>OSDA | 3<br>1<br>3<br>2<br>1<br>2<br>2<br>2<br>1<br>1<br>1<br>1<br>1 | 3<br>1<br>3<br>2<br>1<br>2<br>2<br>2<br>1<br>1<br>1<br>1<br>1 | 3<br>1<br>3<br>2<br>1<br>2<br>2<br>2<br>1<br>1<br>1<br>1<br>1 |                               |
| 1               | 1.21                   | Deauthorize Tuskahoma Reservoir  | 10 years         | 2      | ES       | CE   | TBD   | TBD   | TBD   | Requires Congressional action |
| 1               | 1.31                   | Develop and implement monitoring of the Kiamichi River population and its habitat                    | 3-year intervals | 2      | ES       | ODWC<br>ONHI   | 10<br>5<br>5  | 0<br>0<br>0   | 0<br>0<br>0   |                               |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |         | Other   | Cost Estimates (\$1000s)                  |   |   | Comments  |
|-----------------|------------------------|---|-----------------|--------|---------|---|---|---|---|---|
|                 |                        |   |                 | Region | Program |   | FY1                                       | FY2                                       | FY3                                       |   |
| 1               | 1.32                   | Develop and implement monitoring of current and potential threats to the Kiamichi River population                          | Continuous      | 2      | ES      | CE<br>EPA<br>FS<br>OCONS<br>ODEQ<br>ODM<br>ODWC<br>OSDA | 4<br>4<br>4<br>3<br>3<br>3<br>3<br>3<br>3 | 4<br>4<br>4<br>2<br>3<br>3<br>1<br>2<br>2 | 4<br>4<br>4<br>2<br>3<br>3<br>1<br>2<br>2 |   |
| 1               | 4.1                    | Determine and protect the fish host(s) and its (their) habitat  | 3 years         | 2, 4   | ES      | AGFC<br>ODWC<br>Contr                                   | 30<br>5<br>5                              | 30<br>5<br>5                              | 30<br>5<br>5                              | Dependent upon determining timing of glochidial release                   |
| 1               | 4.2                    | Determine sex ratio among Ouachita rock pocketbook, ages at which they produce gametes, and seasonal timing of reproduction | 2 years         | 2, 4   | ES      | AGFC<br>ODWC<br>Contr                                   | 44<br>8<br>8                              | 44<br>8<br>8                              | 0<br>0<br>0                               | Initial estimates supplemented by data collected through continuing tasks |
| 1               | 5.2                    | Determine habitat and early life history of juvenile Ouachita rock pocketbooks  | 3 years         | 2      | ES      | ODWC<br>ONHI  | 20<br>5<br>5                              | 20<br>5<br>5                              | 20<br>5<br>5                              |   |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description   | Action Duration | FWS    |          | Other   | Cost Estimates (\$1000s)                  |   |   | Comments |
|-----------------|------------------------|--|-----------------|--------|----------|---|---|---|---|----------|
|                 |                        |  |                 | Region | Program  |   | FY1                                       | FY2                                       | FY3                                       |          |
| 1               | 5.3                    | Determine environmental sensitivities of the Ouachita rock pocketbook                                      | 5 years         | 2      | ES<br>WR | CE<br>EPA<br>FS<br>ODWC<br>Contr                                | 15<br>10<br>30<br>30<br>10<br>5           | 15<br>10<br>30<br>30<br>10<br>5           | 15<br>10<br>30<br>30<br>10<br>5           |          |
| 2               | 1.22                   | Determine value of major tributaries as habitat for the Kiamichi River population                          | 1 year          | 2      | ES       | ODWC<br>ONHI<br>HTRG  | 2<br>2<br>2<br>2                          | 0<br>0<br>0<br>0                          | 0<br>0<br>0<br>0                          |          |
| 2               | 1.23                   | Perform cooperative projects to increase habitat protection in the Kiamichi River                          | Continuous      | 2      | ES       | CE<br>EPA<br>FHWA<br>FS<br>USDA<br>OCONS<br>ODT<br>ODWC<br>OSDA | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 5<br>2<br>4<br>2<br>4<br>1<br>1<br>2<br>2 | 5<br>2<br>4<br>2<br>4<br>1<br>1<br>2<br>2 |          |
| 2               | 1.24                   | Upgrade protection of Kiamichi River through water quality standards and water quality management programs | 10 years        | 2      | ES       | EPA<br>FS<br>OCONS<br>ODEQ<br>ODWC<br>ODSA<br>OWRB              | 2<br>2<br>1<br>1<br>1<br>1<br>1           | 4<br>4<br>2<br>2<br>2<br>2<br>2           | 4<br>4<br>2<br>2<br>2<br>2<br>2           |          |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |          | Other                             | Cost Estimates (\$1000s) |     |     | Comments |
|-----------------|------------------------|---|-----------------|--------|----------|-----------------------------------|--------------------------|-----|-----|----------|
|                 |                        |   |                 | Region | Program  |                                   | FY1                      | FY2 | FY3 |          |
| 2               | 2.1                    | Conduct a survey of the Little River in Arkansas and Oklahoma for existing populations                  | 1 year          | 2,4    | ES<br>RS | CE<br>FS<br>AGFC<br>ODWC<br>Contr | 3                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 1                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
| 2               | 2.2                    | Conduct surveys of the Ouachita River in Arkansas for existing populations                              | 2 years         | 2,4    | ES       | CE<br>FS<br>AGFC<br>Contr         | 4                        | 4   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 3                        | 3   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 2   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 3                        | 3   | 0   |          |
| 2               | 2.3                    | Conduct surveys of other Red River tributaries in Oklahoma, Texas and Arkansas for existing populations | 1 year          | 2,4    | ES       | AGFC<br>ODWC<br>TPWD<br>Contr     | 4                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |
|                 |                        |   |                 |        |          |                                   | 2                        | 0   | 0   |          |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |                | Other | Cost Estimates (\$1000s) |     |     | Comments                                      |
|-----------------|------------------------|---|-----------------|--------|----------------|-------|--------------------------|-----|-----|---|
|                 |                        |   |                 | Region | Program        |       | FY1                      | FY2 | FY3 |   |
| 2               | 3.1                    | Use existing statutes to restore and protect habitat for the Ouachita rock pocketbook outside of the Kiamichi River | Continuous      | 2,4    | ES<br>LE<br>RS |       | 6                        | 6   | 6   |   |
|                 |                        |   |                 |        |                |       | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                |       | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | CE    | 6                        | 6   | 6   |   |
|                 |                        |   |                 |        |                | EPA   | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |                | FERC  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | FHWA  | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |                | FS    | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |                | USDA  | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |                | ADE   | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | AGFC  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | ODEQ  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | ODM   | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | ODWC  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | OSDA  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | TCEQ  | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |                | TPWD  | 2                        | 2   | 2   |   |
| 2               | 3.21                   | Deauthorize unimplemented channel modifications of the Ouachita River   | 10 years        | 2,4    | ES             | CE    | TBD                      | TBD | TBD | Deauthorization requires Congressional action |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |          | Other | Cost Estimates (\$1000s) |     |     | Comments                         |
|-----------------|------------------------|---|-----------------|--------|----------|-------|--------------------------|-----|-----|----------------------------------|
|                 |                        |   |                 | Region | Program  |       | FY1                      | FY2 | FY3 |                                  |
| 2               | 3.22                   | Develop and implement cooperative projects to increase restoration and protection of degraded habitat and populations outside of the Kiamichi River | Continuous      | 2,4    | ES<br>RS |       | 6                        | 6   | 6   |                                  |
|                 |                        |   |                 |        |          |       | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | CE    | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | EPA   | 8                        | 8   | 8   |                                  |
|                 |                        |   |                 |        |          | FHWA  | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | FS    | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | USDA  | 8                        | 8   | 8   |                                  |
|                 |                        |   |                 |        |          | AGFC  | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | AHTD  | 2                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | OCONS | 2                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | OGT   | 2                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | ODWC  | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | OSDA  | 2                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | TPWD  | 4                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | TxDOT | 2                        | 2   | 2   |                                  |
| 2               | 3.23                   | Upgrade protection of degraded habitat areas outside of the Kiamichi River through water quality standards and water quality management programs    | 10 years        | 2,4    | ES       |       | 5                        | 10  | 10  | Coordinate with Tasks 1.24 and 5 |
|                 |                        |   |                 |        |          | EPA   | 4                        | 8   | 8   |                                  |
|                 |                        |   |                 |        |          | FS    | 2                        | 4   | 4   |                                  |
|                 |                        |   |                 |        |          | ADE   | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | AGFC  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | OCONS | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | ODEQ  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | ODWC  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | OSDA  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | OWRB  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | TCEQ  | 1                        | 2   | 2   |                                  |
|                 |                        |   |                 |        |          | TPWD  | 1                        | 2   | 2   |                                  |



**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |          | Other | Cost Estimates (\$1000s) |     |     | Comments                                  |
|-----------------|------------------------|---|-----------------|--------|----------|-------|--------------------------|-----|-----|---|
|                 |                        |   |                 | Region | Program  |       | FY1                      | FY2 | FY3 |   |
| 2               | 3.3                    | Institute a monitoring program for degraded populations and habitat outside of the Kiamichi River | Continuous      | 2,4    | ES<br>RS |       | 7                        | 7   | 7   | Biological monitoring at 3-year intervals |
|                 |                        |   |                 |        |          |       | 2                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | CE    | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |          | EPA   | 4                        | 4   | 4   |   |
|                 |                        |   |                 |        |          | FS    | 3                        | 3   | 3   |   |
|                 |                        |   |                 |        |          | ADE   | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | AGFC  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | OCONS | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | ODEQ  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | ODM   | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | ODWC  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | ONHI  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | OSDA  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | TCEQ  | 3                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | TPWD  | 3                        | 2   | 2   |   |
| 2               | 5.1                    | Determine habitat use of populations outside of the Kiamichi River                                | 3 years         | 2,4    | ES       |       | 0                        | 8   | 8   |   |
|                 |                        |   |                 |        |          | AGFC  | 0                        | 4   | 4   |   |
|                 |                        |   |                 |        |          | ODWC  | 0                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | ONHI  | 0                        | 2   | 2   |   |
|                 |                        |   |                 |        |          | TPWD  | 0                        | 4   | 4   |   |
| 3               | 1.251                  | Inventory property ownerships and water rights appropriations along the Kiamichi River            | 2 years         | 2      | ES<br>RE |       | 2                        | 2   | 0   |   |
|                 |                        |   |                 |        |          |       | 1                        | 1   | 0   |   |
|                 |                        |   |                 |        |          | ODWC  | 1                        | 1   | 0   |   |
|                 |                        |   |                 |        |          | ONHI  | 1                        | 1   | 0   |   |
|                 |                        |   |                 |        |          | HTRG  | 1                        | 1   | 0   |   |
| 3               | 1.252                  | Ensure public landowner notification  | 1 year          | 2      | ES       | ODWC  | 0                        | 1   | 0   |   |
|                 |                        |   |                 |        |          |       | 0                        | 0   | 0   |   |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description   | Action Duration | FWS    |                      | Other   | Cost Estimates (\$1000s)                                  |   |   | Comments |
|-----------------|------------------------|--|-----------------|--------|----------------------|---|---|---|---|----------|
|                 |                        |  |                 | Region | Program              |   | FY1   | FY2   | FY3   |          |
| 3               | 1.253                  | Ensure private landowner notification  | 1 year          | 2      | ES                   | ODWC  | 0<br>0  | 2<br>1  | 0<br>0  |          |
| 3               | 1.254                  | Manage response to identified threats to the Kiamichi River population                         | Continuous      | 2      | ES                   | CE<br>FS<br>OCONS<br>ODEQ<br>ODM<br>ODWC<br>OSDA          | 1<br>1<br>1<br>1<br>0<br>0<br>0                           | 1<br>0<br>0<br>1<br>0<br>0<br>0                           | 1<br>0<br>0<br>1<br>0<br>0<br>0                           |          |
| 3               | 1.255                  | Develop protection approaches for specific Kiamichi River properties                           | Continuous      | 2      | ES<br>LE<br>RE<br>RS | CE<br>FHWA<br>FS<br>USDA<br>OCONS<br>ODWC<br>ONHI<br>HTRG | 12<br>1<br>1<br>1<br>4<br>3<br>3<br>3<br>2<br>5<br>3<br>2 | 12<br>1<br>1<br>1<br>4<br>3<br>3<br>3<br>2<br>5<br>3<br>2 | 12<br>1<br>1<br>1<br>4<br>3<br>3<br>3<br>2<br>5<br>3<br>2 |          |
| 3               | 1.256                  | Integrate initial protections into a habitat protection plan for the Kiamichi River population | 3 years         | 2      | ES                   | ODWC  | 5<br>5  | 5<br>5  | 5<br>5  |          |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |         | Other                         | Cost Estimates (\$1000s) |     |     | Comments   |
|-----------------|------------------------|---|-----------------|--------|---------|-------------------------------|--------------------------|-----|-----|--|
|                 |                        |   |                 | Region | Program |                               | FY1                      | FY2 | FY3 |  |
| 3               | 2.4                    | Determine if any populations outside of the Kiamichi River are viable   | 2 years         | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>Contr | 6                        | 6   | 0   | Initial assessment to be revised, based on completion of Task 6.2 and cumulative monitoring data |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
| 3               | 6.1                    | Determine comparative genetic composition of extant populations   | 2 years         | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>Contr | 9                        | 9   | 0   |  |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
|                 |                        |   |                 |        |         |                               | 2                        | 2   | 0   |  |
| 3               | 6.2                    | Determine factors limiting population growth, and refine characterization of population viability for the species | 2 years         | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>Contr | 0                        | 0   | 0   | Dependent upon results from Tasks 2,4,5 and 6.1; start estimated in year 5 of recovery program   |
|                 |                        |   |                 |        |         |                               | 0                        | 0   | 0   |  |
|                 |                        |   |                 |        |         |                               | 0                        | 0   | 0   |  |
|                 |                        |   |                 |        |         |                               | 0                        | 0   | 0   |  |
| 3               | 7.1                    | Develop techniques for successful transplantation   | 3 years         | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>Contr | 16                       | 16  | 16  | Prerequisite to Tasks 7.2, 7.3, 7.4  |
|                 |                        |   |                 |        |         |                               | 8                        | 8   | 8   |  |
|                 |                        |   |                 |        |         |                               | 8                        | 8   | 8   |  |
|                 |                        |   |                 |        |         |                               | 8                        | 8   | 8   |  |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration                     | FWS    |          | Other  | Cost Estimates (\$1000s)                                 |   |   | Comments   |
|-----------------|------------------------|---|-------------------------------------|--------|----------|--|--|---|---|--|
|                 |                        |   |                                     | Region | Program  |  | FY1  | FY2   | FY3   |  |
| 3               | 7.2                    | Select stream sites for introduction  | 1 year                              | 2,4    | ES       | AGFC<br>ODWC<br>TPWD   | 0<br>0<br>0<br>0   | 0<br>0<br>0<br>0                                    | 0<br>0<br>0<br>0                                    | Start estimated in year 4  |
| 3               | 7.3                    | Translocate Ouachita rock pocketbooks into two populations outside of the Kiamichi River population | 1 year                              | 2,4    | ES       | AGFC<br>ODWC<br>TPWD   | 0<br>0<br>0<br>0   | 0<br>0<br>0<br>0                                    | 0<br>0<br>0<br>0                                    | Start estimated in year 5  |
| 3               | 7.4                    | Protect transplanted populations and evaluate success   | Continuous                          | 2,4    | ES<br>LE | CE<br>EPA<br>FHWA<br>FS<br>USDA<br>ADE<br>AGFC<br>ODEQ<br>ODWC<br>TCEQ<br>TPWD | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | Start estimated in year 5. With success in second year, incorporate continued protection into Task 3 |
| 3               | 8                      | Develop an outreach program   | 2 years to develop, then continuous | 2,4    | ES<br>EA | AGFC<br>ADPT<br>ODWC<br>OTRD<br>TPWD   | 4<br>4<br>3<br>3<br>3<br>5                               | 4<br>4<br>3<br>3<br>3<br>5                          | 1<br>1<br>0<br>0<br>0<br>0                          |  |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration | FWS    |          | Other | Cost Estimates (\$1000s) |     |     | Comments |
|-----------------|------------------------|---|-----------------|--------|----------|-------|--------------------------|-----|-----|----------|
|                 |                        |   |                 | Region | Program  |       | FY1                      | FY2 | FY3 |          |
| 3               | 9.1                    | Improve coordination of monitoring and research activities with management activities | Continuous      | 2,4    | ES       |       | 4                        | 4   | 4   |          |
|                 |                        |   |                 |        |          | CE    | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | EPA   | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | FS    | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | ADE   | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | AGFC  | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | OCONS | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | ODEQ  | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | ODWC  | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | ONHI  | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | TCEQ  | 0                        | 0   | 0   |          |
|                 |                        |   |                 |        |          | TPWD  | 0                        | 0   | 0   |          |
| 3               | 9.2                    | Better correlate basin conditions and human activities with habitat conditions        | 5 years         | 2,4    | ES<br>WR |       | 3                        | 6   | 6   |          |
|                 |                        |   |                 |        |          |       | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | CE    | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | EPA   | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | FS    | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | ADE   | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | AGFC  | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | OCONS | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | ODEQ  | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | ODWC  | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | OSDA  | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | TCEQ  | 1                        | 2   | 2   |          |
|                 |                        |   |                 |        |          | TPWD  | 1                        | 2   | 2   |          |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description   | Action Duration | FWS    |                      | Other | Cost Estimates (\$1000s) |     |     | Comments                  |
|-----------------|------------------------|--|-----------------|--------|----------------------|-------|--------------------------|-----|-----|---------------------------|
|                 |                        |  |                 | Region | Program              |       | FY1                      | FY2 | FY3 |                           |
| 3               | 9.3                    | Better indicate and implement appropriate treatments and responses for identified threats/sources of degradation | 5 years         | 2,4    | ES                   |       | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | CE    | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | EPA   | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | FHWA  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | FS    | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | ADE   | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | AGFC  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | OCONS | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | ODEQ  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | ODM   | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | ODWC  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | OSDA  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | TCEQ  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | TPWD  | 1                        | 1   | 1   |                           |
|                 |                        |  |                 |        |                      | WEYCO | 1                        | 1   | 1   |                           |
| 3               | 9.4                    | Develop expanded habitat restoration-protection plan for all areas inhabited by the Ouachita rock pocketbook     | 3 years         | 2,4    | ES<br>LE<br>RE<br>RS |       | 0                        | 0   | 0   | Start estimated in year 5 |
|                 |                        |  |                 |        |                      | CE    | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | FHWA  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | FS    | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | USDA  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | AGFC  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | OCONS | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | ODEQ  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | ODM   | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | ODWC  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | OSDA  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | TPWD  | 0                        | 0   | 0   |                           |
|                 |                        |  |                 |        |                      | ONHI  | 0                        | 0   | 0   |                           |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description  | Action Duration                      | FWS    |         | Other                                   | Cost Estimates (\$1000s)   |                            |                            | Comments |
|-----------------|------------------------|---|--------------------------------------|--------|---------|---|----------------------------|----------------------------|----------------------------|----------|
|                 |                        |   |                                      | Region | Program |   | FY1                        | FY2                        | FY3                        |          |
| 3               | 9.5                    | Develop enhanced notification and consultation procedures                           | 5 years                              | 2,4    | ES      | CE<br>EPA<br>FERC<br>FHWA<br>FS<br>USDA | 4<br>0<br>0<br>0<br>0<br>0 | 4<br>0<br>0<br>0<br>0<br>0 | 4<br>0<br>0<br>0<br>0<br>0 |          |
| 3               | 9.61                   | Develop necessary resources for captive propagation of the Ouachita rock pocketbook | 3 years to develop, then indefinite  | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>AZAA<br>Contr   | 80<br>25<br>25<br>25<br>25 | 80<br>25<br>25<br>25<br>25 | 80<br>25<br>25<br>25<br>25 |          |
| 3               | 9.62                   | Perform cryogenic preservation for the Ouachita rock pocketbook                     | 1 year to establish, then continuous | 2,4    | ES      | AGFC<br>ODWC<br>TPWD<br>AZAA<br>Contr   | 0<br>0<br>0<br>0           | 10<br>5<br>5<br>5          | 2<br>0<br>0<br>0           |          |

**IMPLEMENTATION SCHEDULE**

| Priority Number | Recovery Action Number | Action Description   | Action Duration                       | FWS    |         | Other  | Cost Estimates (\$1000s) |     |     | Comments                         |
|-----------------|------------------------|--|---------------------------------------|--------|---------|--|--------------------------|-----|-----|----------------------------------|
|                 |                        |  |                                       | Region | Program |  | FY1                      | FY2 | FY3 |                                  |
| 3               | 9.71                   | Establish and permanently protect viable populations in all four stream systems historically inhabited by the Ouachita rock pocketbook | 3 years to establish, then continuous | 2,4    | ES      | CE<br>EPA<br>FHWA<br>FS<br>USDA<br>ADE<br>AGFC<br>ODEQ<br>ODWC<br>TCEQ<br>TPWD | TBD                      | TBD | TBD | Timing and cost to be determined |
| 3               | 9.72                   | Refine delisting criterion, and provide any corresponding measures needed to support delisting of the Ouachita rock pocketbook         | Continuous                            | 2,4    | ES      | AGFC<br>ODWC<br>TPWD   | TBD                      | TBD | TBD | Timing and cost to be determined |